

CLAIMS

1. An aerosol generator for producing an aerosolized powder, said aerosol generator comprising:

- a metering pocket, with powder loaded into said metering pocket;
- a jet for directing high velocity gas into said metering pocket so as to fluidize the powder and produce an expansive bolus; and
- a mixing chamber into which the expansive bolus is directed.

2. The aerosol generator of claim 1, wherein said metering pocket is a micropocket having a volume of the order of one cubic millimeter.

3. The aerosol generator of claim 1, wherein said jet directs gas at a velocity approaching Mach 1 into said metering pocket.

4. The aerosol generator of claim 1, wherein said jet directs gas impulsively into said metering pocket.

5. The aerosol generator of claim 1, wherein said jet directs gas continuously into said metering pocket.

6. The aerosol generator of claim 1, wherein said jet directs gas both continuously and impulsively into said metering pocket.

7. The aerosol generator of claim 1, wherein said jet directs high velocity gas into said metering pocket through a passageway in a wall of said metering pocket.

8. The aerosol generator of claim 1, wherein said jet directs high velocity gas into said metering pocket from outside said metering pocket.

9. The aerosol generator of claim 1, which further comprises:

a powder chamber containing powder to be aerosolized;
a sealing gland separating said powder chamber (122) and said mixing chamber; and wherein

said metering pocket comprises a microscoop in the form of a plunger rod having a tip with said metering pocket formed within said tip, said plunger rod passing through powder in said powder chamber so as to load powder within said metering pocket and then engaging and penetrating said sealing gland.

10. The aerosol generator of claim 1, which further comprises:

a body;

a powder pocket cylinder cavity within said body and a powder pocket cylinder within said powder pocket cylinder cavity, said powder pocket cylinder having an outer cylindrical surface and a plurality of metering pockets formed within said cylindrical surface, and

a passageway within said body communicating with a metering pocket of said plurality when said metering pocket is in an active position so as to provide access to said metering pocket.

11. The aerosol generator of claim 10, which further comprises:

a metering cylinder cavity within said body and a rotating metering cylinder within said metering cylinder cavity, said rotating metering cylinder comprising an outer tube with first and second openings in the wall of said outer

tube, said first opening being selectively alignable with said passageway communicating with said metering pocket; and wherein said gas jet is within said outer tube and directs high velocity gas through said first opening into said metering pocket, thereby fluidizing powder which passes through said first opening into the interior of said outer tube and out through said second opening as an expansive bolus.

12. The aerosol generator of claim 1, which further comprises a megadose disc having a surface and a plurality of metering pockets formed in said surface.

13. An aerosol generator for producing an aerosolized powder, said aerosol generator comprising:
 - a source of a liquid solution of an active ingredient and a volatile solvent;
 - an atomizer for atomizing the solution to produce droplets from which the solvent evaporates to leave an expansive bolus of solute residue; and
 - a mixing chamber into which the expansive bolus is directed.